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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,738

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EXAMINER

BURD, KEVIN MICHAEL

ART UNIT

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,738	Applicant(s) MILLER-SMITH, RICHARD M.	
	Examiner Kevin M. Burd	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-13 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-13 and 15-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. This office action, in response to the amendment filed 9/10/2010, is a final office action.

Response to Arguments

2. Applicant's arguments filed 9/10/2010 have been fully considered but they are not persuasive.

Regarding the rejection of claim 19, applicant argues the record carrier recited in claim 19 is not an electromagnetic signal but is a piece of media. However, no support for this comment is provided in the originally filed specification. The previous rejection of the claim under 35 USC 101 was made using the ordinary and customary definition of a carrier. In addition, even if the record carrier was a piece of media, a rejection of the claim under 35 USC 101 would still be appropriate. 1351 OG 212 states:

Subject Matter Eligibility of Computer Readable Media

The United States Patent and Trademark Office (USPTO) is obliged to give claims their broadest reasonable interpretation consistent with the specification during proceedings before the USPTO. See *In re Zletz*, 893 F.2d 319 (Fed. Cir. 1989) (during patent examination the pending claims must be interpreted as broadly as their terms reasonably allow). The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. See MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal per se, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter. See *In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101, Aug. 24, 2009; p. 2.

The USPTO recognizes that applicants may have claims directed to computer readable media that cover signals per se, which the USPTO must

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reject under 35 U.S.C. § 101 as covering both non-statutory subject matter and statutory subject matter. In an effort to assist the patent community in overcoming a rejection or potential rejection under 35 U.S.C. § 101 in this situation, the USPTO suggests the following approach. A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim. Cf. *Animals - Patentability*, 1077 Off. Gaz. Pat. Office 24 (April 21, 1987) (suggesting that applicants add the limitation "non-human" to a claim covering a multi-cellular organism to avoid a rejection under 35 U.S.C. § 101). Such an amendment would typically not raise the issue of new matter, even when the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals per se. The limited situations in which such an amendment could raise issues of new matter occur, for example, when the specification does not support a non-transitory embodiment because a signal per se is the only viable embodiment such that the amended claim is impermissibly broadened beyond the supporting disclosure. See, e.g., *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473 (Fed. Cir. 1998).

DAVID J. KAPPOS
Under Secretary of Commerce for
Intellectual Property and
Director of the United States Patent
and Trademark Office

For these reasons and the reasons stated in the previous office action, the rejection of the claim is maintained.

Regarding the rejections of claims 1 and 10, applicant states the Zhou patent does not disclose that a sum of "coefficient values within said transform coded data" is obtained. The examiner disagrees. Zhou (US 2002/0164081) discloses obtaining a sum of AC coefficient values for each block of the macroblock. Therefore, the reference discloses obtaining a sum of coefficient values within said transform coded data as recited in claim 1. Applicant also states the combination of references does not disclose deciding which inverse transform should be performed when decoding the transform coded data. The examiner disagrees. As stated in the previous office action, Zhou (IDCT) discloses in the DCT coding of 8-bit image material, e.g. in MPEG coding, the

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input of the DCT transform should have a precision of 8 bit in intra-coding and 9 bit in motion compensated predictive coding (section 1). Zhou (IDCT) also discloses in MPEG video coding, IDCT is carried out on the intra-block and the inter-block. An intra-block has its values ranged from 0 to 255, while the values of an inter-block are in the interval -255 to 255 (page 141, left column). Therefore, Zhou (IDCT) determines the number of bits required to represent the data. The appropriate decoding will be used in the decoder.

For these reasons and the reasons stated in the previous office action, the previous rejections of the claims are maintained and stated below.

The previous rejection under 35 USC 101 for claims 1-9 and the previous rejection of claims 1-3 and 5-19 are withdrawn in view of the amendment to the claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 19 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Regarding claim 19, the claim recites a record carrier. A carrier is an electromagnetic signal and an electromagnetic signal is not statutory subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6-13 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou (US 2002/0164081) in view of Zhou et al "IDCT output range before clipping in MPEG video coding", Signal Processing, Image Communication, Elsevier Science Publishers, Amsterdam, NL, vol. 11, no, 2, December 1997, pages 137-145.

Regarding claims 1-3, 7, 8, 10-12, 16, 17 and 19, Zhou (US 2002/0164081) discloses a method shown in figure 4. DCT-based video compression such as MPEG1 or MPEG2 is decomposed into macroblocks and the macroblock comprises 8 x 8 blocks (paragraph 0004). DCT is performed on the macroblock. A sum of the coefficients is computed. The sum is compared to a threshold (paragraph 0015 and figure 4) which is a critical component of the quantization (paragraph 0015). An IDCT is then conducted. Zhou (US 2002/0164081) does not disclose determining the number of bits required to represent an output value. Zhou (IDCT) discloses in the DCT coding of 8-bit image material, e.g. in MPEG coding, the input of the DCT transform should have a precision of 8 bit in intra-coding and 9 bit in motion compensated predictive coding (section 1). Zhou (IDCT) also discloses in MPEG video coding, IDCT is carried out on the intra-block and the inter-block. As a consequence of the quantization and inverse

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quantization in MPEG coding and decoding, the precision of the IDCT output and the internal IDCT will be larger than the necessary precision of the DCT input (page 137). An intra-block has its values ranged from 0 to 255, while the values of an inter-block are in the interval -255 to 255 (page 141, left column). Therefore, Zhou (IDCT) determines the number of bits required to represent the data. The combination of Zhou (US 2002/0164081) and Zhou (IDCT) discloses each of the elements claimed although not in a single prior art reference. It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the method and apparatus of Zhou (IDCT) into the method and apparatus of Zhou (US 2002/0164081) and that in combination, each element merely performs the same function done separately. The results of the combination are predictable.

Regarding claims 4 and 13, Zhou (IDCT) discloses in the DCT coding of 8-bit image material, e.g. in MPEG coding, the input of the DCT transform should have a precision of 8 bit in intra-coding and 9 bit in motion compensated predictive coding (section 1). Zhou (IDCT) also discloses in MPEG video coding, IDCT is carried out on the intra-block and the inter-block. An intra-block has its values ranged from 0 to 255, while the values of an inter-block are in the interval -255 to 255 (page 141, left column). Therefore, Zhou (IDCT) determines the number of bits required to represent the data.

Regarding claims 6 and 15, Zhou (IDCT) discloses additional bit precision is used to process the IDCT (right column on page 144 and page 145).

Regarding claims 9 and 18, Zhou (IDCT) discloses the IDCT output will have a maximum value of 517 (page 144).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M. Burd/
Primary Examiner, Art Unit 2611
11/15/2010